

Appendix B

Forecasting Weather in the Mountains

The Air Force provides the bulk of the weather support required by the Army; however, reports from other branches of the military service, our own National Weather Bureau, or a foreign country's weather service can also aid in developing accurate forecasts (see FM 2-33.2). Weather at different elevations and areas, even within the same general region, may differ significantly due to variations in cloud height, temperature, winds, and barometric pressure. Therefore, general reports and forecasts must be used in conjunction with the locally observed weather conditions to produce reliable weather forecasts for a particular mountain area of operations.

INDICATORS OF CHANGING WEATHER

MEASURABLE INDICATORS

B-1. In the mountains, a portable aneroid barometer, thermometer, wind meter, and hygrometer are useful to obtain measurements that will assist in forecasting the weather. Marked or abnormal changes within a 12-hour period in the indicators listed in Figure B-1 may suggest a potential change in the weather.

- **Barometric Pressure**
- **Wind Velocity**
- **Wind Direction**
- **Temperature**
- **Moisture Content of the Air**

Figure B-1. Measurable Weather Indicators

CLOUDS

B-2. Clouds are good indicators of approaching weather conditions. By reading cloud shapes and patterns, observers can forecast weather even without additional equipment.

B-3. Shape and height are used to identify clouds. Shape provides information about the stability of the atmosphere, and height above ground level provides an indication of the distance of an approaching storm. Taken together, both indicate the likelihood of precipitation (see Figure B-2). The heights shown in the figure are an estimate and may vary, based on geographical location.

Clouds by Shape

B-4. Clouds may be classified by shape as cumulus or stratus.

- *Cumulus* clouds are often called “puffy” clouds, looking like tufts of cotton. Their thickness (bottom to top) is usually equal to or greater than their width. Cumulus clouds are primarily composed of water

